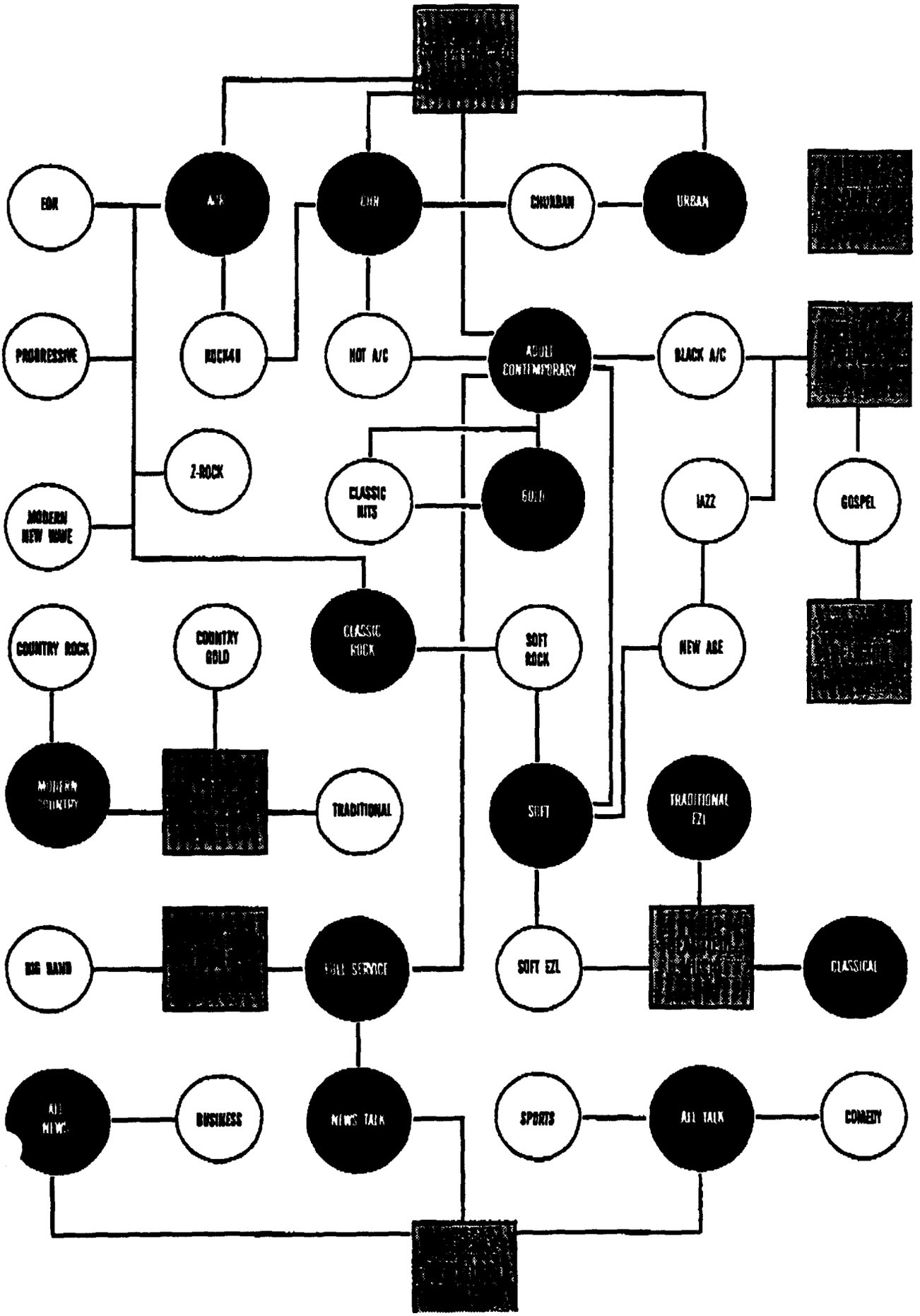
THE DEVELOPMENT OF RADIO FORMATS



ATTACHMENT 9

SPECIAL REPORT

THE ECONOMIC IMPACT OF SATELLITE-DELIVERED RADIO ON LOCAL RADIO STATIONS

9

PREPARED FOR

THE NATIONAL ASSOCIATION OF BROADCASTERS

PREPARED BY:

KAGAN MEDIA APPRAISALS, INC.
126 CLOCK TOWER PLACE
CARMEL, CA 93923
(408) 624-1536

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EXECUTIVE SUMMARY

The following report focuses on the potential economic effects on local radio of new satellite-delivered radio services by analyzing the likely impact of both subscription-based and advertiser-supported satellite-delivered audio as to:

- o Audience Fragmentation and
- o Revenues Lost

Based on the results of our analysis, more fully outlined within this report, we conclude that, at a minimum, **satellite delivered radio could cut in half the cash flow of average large and medium markets, ranked 1-136. In average small market stations, markets 137-200, satellite radio could take all station cash flow. The impact of such economic effects on local radio could be devastating to the quality of the vital community service it provides to listeners and the local advertising community.**

Audience fragmentation was studied in markets which had 1-14 FM signals added between 1985 and 1993. FM stations during this period of time provide an excellent comparable for analysis of the likely impact of satellite-delivered radio services on local radio. It should be emphasized that, of the 36 markets studied, the average market had only six stations added, yet these markets' radio stations displayed significant losses in average station net revenues.

*The impact of increased audience and revenue fragmentation due to an average of **six additional radio signals** shows a clear pattern* on the average large, medium, and small market radio station. From 1985 through 1993, depending on market size, the average station's:

- o Audience share per station declined between 31% and 44%;
- o Net revenues fell between 12% and 26%;
- o Cash flow (operating income before debt service, depreciation, and taxes) declined between 52% and 122%.

Now, new satellite delivered radio services are being proposed that would compete with local radio for listeners and advertising dollars. The proposed services each are promising to offer 21 - 32 channels of programming. **The impact of such an onslaught of new radio signals would be such that existing local stations would incur severe economic hardship -- hardship that would place their survival, let alone continued locally-responsive radio service -- in great peril.**

EXECUTIVE SUMMARY

Satellite-delivered radio service, assuming the proponents expectations of success, *could lead to* the following:

- At least the same financial impact comparable stations have experienced when faced with new competing signals in their markets -- namely dramatic declines in average revenues (12 to 26%) and significant losses of cash flow (52 to 122%); *plus,*

- Lost net revenues of at least 1.5 to 2.3% and reduced cash flow of nearly 5% to 10% *due to lost advertising* from a new satellite radio service that would carry advertising.

While the impact of such a proliferation of programming sources might be shouldered by the largest market stations with the strongest financial resources, the onslaught of new services would likely be devastating to smaller market local radio operations. This will occur only after a substantial number of digital receivers have penetrated the market.

INTRODUCTION

The potential effects of satellite-delivered radio on local radio stations are assessed by analyzing the likely impact of:

- o Audience Fragmentation From All Satellite Sources
- o Lost Revenues From Advertiser-Supported Satellite Service

The report begins with a section describing the business of radio. To understand the impact on terrestial radio stations that the proposed service would have, one needs to have a full appreciation of how the industry generates revenues. This report then provides a summary of the various satellite delivered services proposed. To assess the impact of new satellite radio services on the quality of service and competitive economics of local radio, analysis was made of comparable events over the past ten years that have affected the local radio industry in comparable ways.

The first assessment of impact is with different rated station in one hypothetical mid-sized radio market. The report then quantifies the historical impact that literally thousands of new local radio stations have had on audience fragmentation of the radio industry in general, from 1985 through 1993. A case study of one particular market illustrates the overall effect that a substantial increase in the number of radio signals has had on the local economics of radio. **Results from sample studies of numerous small, medium, and large sized markets indicate that increases in the number of local radio stations have resulted in significant loss of revenues and cash flows for the average competing station.**

Most of the significant loss in revenues and cash flow occurred prior to the recession of 1991-1992. The recession years, however, focused attention on what a cyclical downturn could do to traditional radio broadcasters. The impact was significantly negative. The recession showed how a healthy, but precariously vulnerable, industry wobbled under unusually severe economic market forces. If the economy were to go through another downturn at the same time that satellite delivered services are introduced, the effect on local radio would be even more drastic.

While the introduction of new satellite radio services present some differences from the introduction of new terrestrial radio signals, notably in the current lack of availability of receivers for new satellite radio services, **we believe the same projected effects will occur, but only after substantial numbers of receivers have penetrated the market.** Similarly, new satellite services will be primarily national and, thus, the bulk of new signals would not represent a significant increase in the number of local advertising outlets. We believe, however, that the effect on local advertising rates resulting from increased local outlets throughout 1983 - 1993 would be to some extent analogous to the effect of the increased supply of local advertising time spots resulting from the 10% or more loss in national advertising dollars suggested by one proponent from an advertising supported satellite radio service.

Throughout this report we will examine the impact on radio stations using commonly-used indicators of stations net (of agency and rep commissions) revenues and cash flows (net revenues minus operating expenses). We can determine the impact on these variables using industry reports on the financial health of the radio industry, which detail the sources of revenues as well as the history of profitability (historic cash flows). In order to see the financial impact of the introduction of satellite services, we will use another commonly-used explanatory tool, *an operating leverage matrix*. Basically, that is a *table showing the change in profitability (cash flows or cash flow margins) from changes in net revenues.*

INTRODUCTION

In addition to analyzing potential audience and revenue fragmentation from new subscriber-supported, satellite-delivered competing radio signals, the report also focuses on the radio industry's revenue sources and the vulnerability of the economic base to the one proposed advertising-supported satellite radio service.

Although each section of the report focuses on one particular aspect of local radio's vulnerability to competitive and economic changes, the compounded impact of a combination of factors cannot be minimized. While the report does not attempt to quantify the effect of compounding influences, we intuitively believe that they would be more profound taken together compared to the theoretical sum of their individual impacts.

All of the individually discussed impacts of new stations and changing economics have affected stations differently, depending in general on their market size and revenue base. **Analysis consistently shows that the effect of added stations and economic downturns tends to be more severe on local stations with the smallest revenue base.** Therefore, we must conclude that individually or together, **the same trend would occur if small market stations are faced with a new competitive effect from satellite delivered radio services. In essence, while all stations might suffer, the smallest would suffer the most.**

For the purposes of this research, we utilized current and historical data from the following leading industry sources:

Arbitron Audience Measurement, various and on going audience ratings reports from 1980 through 1993.

James H. Duncan, Jr.
- American Radio, Spring 1993 National Rankings Supplement
- The Relationship Between Audience Shares and Radio Revenue Shares and Radio Station Audience Breakdowns, 1993 Edition

Broadcast Investment Analysis
- Investing in Radio, 1985
- Investing in Radio, 1993, Fourth Edition

National Association of Broadcasters
- Radio Financial Reports, 1986-1992

Paul Kagan Associates
- Broadcast Stats, February 1995.
- Radio Finance Seminar, October 27 1993

SATELLITE DELIVERED RADIO COMPANIES

There are currently four companies seeking FCC approval of their method to bring hundreds of new satellite delivered radio channels to the American marketplace. Three propose subscriber supported services and one proposes an advertiser supported service. Below is a listing of the applicants' characterizations of their proposals, including launch date and ancitipcated penetration of the radio listener marketplace.

SATELLITE RADIO APPLICANTS (AS OF August 31, 1995)

Company	Based in	No. of Channels	Proposed Monthly fee	Type of Coverage	Launch Post FCC Approv.	Subs within 5-Years (mil.)
American Mobile Radio Corp.	Wash., DC	21 (a)	Unknown(b	National	42 months	15.0
Digital Satellite Broadcasting Corp.	Seattle, WA	32 (c)	$5/mo.	Reg./Nat.	5-years	1.5
CD Radio, Inc.	Wash., DC	30	$10/mo.	National	36 mo. (d)	9.9
Primosphere	New York	29 (e)	Ad supported	National	42 months	N/R

(a) Flexible system allows channels to be reconfigured after launch. Initially, AMRC proposes 11 CD quality, 5 FM, and 5 mono channels. (b) No fee specified. AMRC will access customers who will provide programming. System may also carry advertising. (c) 31 regional beams with 16 channels each, and one national beam with 16 channels. About 32 channels will be available in any one of the 31 regional areas. (d) CD-Radio's investment prospectus says it will need to raise $494 mil. before it can launch. (e) Primosphere proposes 23 near-CD quality and 6 non-music channels. N/R = not relevant. Source: various. 1994 KMA, est.

Although subscriber supported services would not appear to propose a direct threat to local broadcasters' revenue base, the audience fragmentation likely to occur from the deluge of programming options could severely handicap traditional radio broadcasting at a time when the industry is just recovering from hundreds of frequency allocations made by the FCC during the 1980s. These three companies are very confident they will be able to attract subscribers. American Mobile Radio Corp. (AMRC) expects 15 million subscribers within five years after introduction. Digital Satellite Broadcasting Corp. (DSBC) anticipates 6.2 million within 10 years after introduction, and CD Radio projects 14.4 million subscribers six years after launching its service.

SUBSCRIBER-SUPPORTED SERVICES

DSBC, AMRC and CD Radio are all proposing subscriber-supported services. For a flat charge or an unspecified per usage fee, subscribers would have access to commercial free, digital radio service.

DSBC proposes a total of 512 channels nationwide with 32 channels available in any one region. AMRC and CD Radio

SATELLITE DELIVERED RADIO COMPANIES (continued)

ch plan to offer a minimum of 20 channels of digital commercial-free music.

CD Radio recently completed an initial public stock offering raising about $8 million for continued pursuit of its business plan, which will require nearly $500 million before it can actually launch its service. CD Radio plans to initially provide 30 channels and later add an additional 20 channels.

Although CD Radio has not received FCC approval, it has scheduled launches of its satellites with Arianespace. Because of high start-up costs, CD Radio approaches the public market with debt of $9.5 million. Also, CD Radio's viability will be dependent on FCC allocation of S-band channels. Receivers, however, are currently not produced for S-band radio.

ADVERTISER-SUPPORTED SERVICE

Primosphere Limited Partnership proposes an advertiser supported service, arguing it will take only 10% of current national radio advertising revenue. Additionally, Primosphere insists that much of its revenue will come from an expanded national advertising base that demand for its service will create.

THE BUSINESS OF RADIO

Radio is a remarkable resilient medium that has expanded from a handful of stations and no national networks during the past nearly 75 years to 10,000 commercial radio stations today and dozens of full service and ad hoc program networks. Radio serves a variety of market segments, from broad to narrow, from young to old, from rich to poor.

As media and technology become more sophisticated, commercial radio has had to become more competitive. It has already survived competition from newspapers, television, cable TV, records, cassettes, walk-along tape players, CDs, cable radio, video games, and computers, for a share of consumers' attention and leisure time. Given all the new-age wireless and wired telecommunications media here and coming -- including direct broadcast satellite ("DBS"), wireless cable, and Internet audio -- local radio is likely to face its toughest challenge as more and more media attempt to fragment radio's already fragmented audience and economics.

Revenue Generation in Radio

Advertising Time Sales

Commercial radio stations derive almost all of their revenue from the sale of advertising time. There are two general classifications of revenue -- national and local. Within these segments there are other types of advertising such as network, regional spot, co-op and barter.

In 1994, total radio industry advertising revenue was $10.5 billion. It's a rather small number compared to other media. For example, less than 8,000 cable television systems generated nearly $23 billion of total revenues last year. And less than 1,000 commercial broadcast television stations billed about $10 billion in 1994. Newspaper revenue last year was over $34 billion, split among about 10,000 dailies and weekly mastheads.

Unlike TV, print, and cable; radio is mostly dependent upon local advertising revenue. Typically, about 77% of total radio industry revenue is derived from local advertisers. National advertising accounts for about 18% of total revenue while network advertising comprises the smallest share -- about 5%.

Costs of Selling Advertising Time

Advertising agencies function to create and place ads for their clients. Agencies make their money as a commission on the dollar amount of advertising placed. Typically, stations pay a commission of about 10-15% of the advertising placed on the station. Agencies also derive a commission and fees from their clients for the advertising they place.

A station's sales staff is typically paid a commission of 10% to 15% on the amount of advertising it sells to direct clients and agencies. Thus, a radio station may wind up paying two commissions--one to its own sales person, or national representative, and one to an ad agency. Typically, about 30 cents of every revenue dollar goes toward commissions and sales salaries.

National advertising generally is the "most expensive business" to a radio station because it costs the station the most to sell it. National advertising is not placed equally among all stations in different market sizes. In general, most national advertising is placed in the top-100 size markets. The smaller the station and the smaller the market, the less, if any, national advertising that will be placed.

Network advertising is the cheapest, but it generally is sold at a deep discount. A network may pay a station compensation of up to 30% of the station's ad rate for the network advertising that runs within network shows. Thus, while network advertising may comprise 5% of total industry revenue, network ad compensation tends to account for less than 2% of a station's total revenues.

Advertising Pricing

Most ad revenue is based on a station's rate card. It determines the amount a station will charge an advertiser for a commercial message. Ad rates generally are a function of volume and schedule. In the vast majority of cases, the more an advertiser buys, the lower the unit rate. Certain day parts like morning drive and afternoon drive times--when most listeners tune in--sell at a premium ad rate.

Radio stations compete against other media, and each other, for audience ratings and advertisers. Stations tend to "position" their brand appeal to much in the same way that other image-conscious products are marketed. There are as many positioning strategies as there are radio stations, with each tailored to the unique characteristics of the station's programming, personnel, resources, audience life style and taste, and its advertiser's desire to be identified with the station and its audience.

The success of any radio station within a market is usually determined by the ratings it generates among its listeners, and the amount of market revenue share it claims. The latter--revenue share--is usually a function of the former--ratings. The higher the ratings, the more a station can charge for its advertising. Since most stations have a relatively fixed amount of advertising inventory to sell each hour--roughly 10 to 20 commercial messages of various lengths--the higher the ratings, the more revenue a station can generate.

In approximately the top 150 markets, Arbitron, a nationally recognized audience measurement service, conducts audience surveys numerous times throughout the year, and publishes the results in "ratings books." In small markets, regional or local measurement companies also conduct rating surveys. Audience ratings are expressed in various measurements, reflecting listening among the broad market population for ages 12 and over, to smaller demographic cells that advertisers are most interested in targeting -- e.g. adults aged 18-34, men 18-24, women 25-49, etc.

Stations try to dominate a particular demographic in order to garner the largest share of the advertising budgets targeted at the demographic. Adults aged 25-49 tend to have the most purchasing power. However, many stations focus on teenagers, or young adult men, in order to maximize their program niche and resulting revenue share.

Cash Flow Generation

Due to the fluxuations of ratings and, in turn, advertising revenue, radio is a business of high operating leverage. A station must shoulder a certain amount of fixed operating expenses in order to serve the audience with programming, pay its on air talent or program service, produce its programming and commercial content, meet its operating overhead expenses for technical support, administrative personnel, internal and external support staff, promotion and marketing and its key managers. Fixed expenses tend to be predictable, depending on the size of the station's staff, its format, and its market size. In general, the larger the market the station operates in, the higher are its fixed expenses.

THE BUSINESS OF RADIO (Continued)

The largest variable cost incurred by a radio station is its cost of sales. After a station meets its variable cost of sales, and its fixed expenses, the remainder of its revenues flows through to cash flow--revenues less sales and operating expenses, before non cash charges of depreciation and amortization, and "below the line" expenses for interest on debt, capital expenditures, and taxes. Cash flow is often referred to as EBITDA--earnings before interest, taxes, depreciation and amortization.

The more revenue a station can generate, the more cash flow it can realize. In theory, for every dollar of incremental revenue above break even total operating expenses -- sales and fixed costs -- about 70-cents can go right to cash flow. That's why highly rated stations in large markets often generate 40% or higher cash flow margins. In contrast, lower rated stations in small markets often generate negative cash flow or, at best, small cash flow margins.

FRAGMENTATION EFFECTS BY STATION SIZE

Radio is a business dependent on delivering audiences to advertisers. In most of the top 150 size markets, stations compete for audience ratings. In general, the lower the rating, the lower the station's share of the advertising market.

By definition, a rating is the percentage of the total population, or specific demographic, within the market that listens to a particular station. Local commercial radio stations experience a certain amount of radio rating fragmentation due to listeners tuned to distant signals from outside the market, or tuned to non-commercial stations in the market (i.e. public, educational and religious formatted stations that generally do not compete for advertising revenue) However, in recent years even these "noncommercial" stations have become a factor in the advertising marketplace as they seek "underwriting" contributions from various companies that are or might otherwise be commercial radio advertisers.

Thus, the ratings for all the commercial stations within a market may not add up to 100%. The actual in market ratings of commercial stations might typically add up to only 75%. All things being equal, a station with a 10 rating would seek to claim 13.3% of the local market's total radio revenue (10 divided by 75 = 13.3%). Beyond that, most stations do not claim proportionate share of their market revenues. Some claim a higher weighted share, and some generate a lower weighted share.

As explained above, due to inherent audience fragmentation within a market, stations do not convert their audience rating into an equal share of the market's revenue pie. For example, a top rated station may convert its audience rating into revenue share that is 40% higher than its weighted audience share. The conversion is often referred to as a station's "power ratio." In the case of a top rated station, it is not unusual for the power ratio to be 1.4. Thus, a station with a 10 rating might have a 14 share of the market revenue (10- rating times 1.4 power ratio = 14%)

A mid-rated station typically could convert its audience rating into revenue share at a 15% premium, or a 1.15 power ratio. Thus, a station with an 8-rating might claim 9.2% of the market revenue (8 rating times 1.15 power ratio = 9.2%) Likewise, a low rated station may suffer a negative power ratio by converting its audience share to revenue share at less than a 1-to-1 ratio. Typically, its power ratio might be 0.95. If a station with a 3-rating converted at a negative power ratio of 0.95, its revenue share might be only 2.9% (3-rating times 0.95 power ratio = 2.9%).

In general, the higher a station is rated, the more revenue it generates, and the more cash flow it generates. Typically, a top rated station will cash flow 33% of its revenue base. The cash flow margin is generally lower on a mid-rated station.

Typically, cash flow margins for mid-rated station might run 20%. A low rated station, however, might generate only 10% cash flow margins. And, as noted in the previous section, many low rated stations suffer negative cash flow.

Due to the nature of fixed operating costs (non sales related expenses) when ratings decline, revenues and cash flows also decline. Fixed expenses will tend to remain at about the same level, unless a station begins to cut costs by laying off personnel and cutting programming services. Likewise, cost cutting tends to occur after revenues begin to decline. As in all businesses with fixed operating costs, there is only a certain amount of expense cutting that can be achieved.

FRAGMENTATION EFFECTS BY STATION SIZE (Continued)

It is not unusual for cost cutting to result in a vicious downward cycle in which attractive station attributes -- such as programs, air personalities, features, news coverage, etc. -- are sacrificed to expense cuts. The station may have a difficult time restoring its ratings if the station relinquishes the key station attributes for which listeners used to tune in.

The following tables estimate what the impact would be of lower ratings on top, mid, and low-rated stations in a typical mid-sized radio market with 25 million dollars of total market revenues. In each model, the station's non-fragmented* ratings, revenues, expenses, and cash flows are estimated. Three additional columns show what the impact would be of audience fragmentation of 5%, 10% and 15% on each station.

For this exercise, we assume that all of the stations cost of sales is 30% of its revenues, and that fixed expenses for each station remain unchanged. The three subject stations, however, vary in pre-fragmentation* performance, as follows:

Top Rated: 15 rating, 1.4 power ratio, and 33% cash flow margin;
Mid Rated: 8 rating, 1.15 power ratio, and a 20% cash flow margin;
Low rated: 3 rating, 0.95 power ratio, and a 10% cash flow margin.

Here we show that a **top-rated station's cash flow could decline 11% to 32%,** depending on the level of audience fragmentation. **For a mid-rated station with lower cash flow margins, the cash flow loss could be 18% to 52% due to audience fragmentation. Low-rated stations,** of course, are the most susceptible to audience fragmentation, **potentially losing 35% to 105% of their cash flow.** In essence, a low-rated station with a 10% positive cash flow margin could degenerate to a negative cash flow position if its thin ratings were fragmented by as little as 15%.

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* "Non-fragmented" and "pre-fragmentation" refer to the circumstances today before the addition of new competitive signals.

FRAGMENTATION EFFECTS BY STATION SIZE (Continued)

TABLE 1

Effect of Audience Fragmentation on Top, Mid, and Low-Rated Stations
(Located in a Mid-Sized Radio Market with $25 Million in Revenue)

TOP RATED STATION

(all $ in millions)	Before:	- If Audience Fragmentation -		
		-5%	-10%	-15%
Station Rating	15.0	14.3	13.5	12.8
Power Ratio	1.4	1.4	1.4	1.4
Revenue Share	21.0%	20.0%	18.9%	17.9%
Station Revenue	$5.250	$4.988	$4.725	$4.463
Cost of Sales @ 30%	$1.575	$1.496	$1.417	$1.339
Fixed Expense	$1.943	$1.943	$1.943	$1.943
Cash Flow	$1.733	$1.549	$1.365	$1.181
Margin	33%	31%	29%	26%
% change of cash flow		-11%	-21%	-32%

MID RATED STATION

(all $ in millions)	Before:	- If Audience Fragmentation -		
		-5%	-10%	-15%
Station Rating	8.0	7.6	7.2	6.8
Power Ratio	1.15	1.15	1.15	1.15
Revenue Share	9.2%	8.7%	8.3%	7.8%
Station Revenue	$2.300	$2.185	$2.070	$1.955
Cost of Sales @ 30%	$0.690	$0.655	$0.621	$0.587
Fixed Expense	$1.150	$1.150	$1.150	$1.150
Cash Flow	$0.460	$0.379	$0.299	$0.219
Margin	20%	17%	14%	11%
% change of cash flow		-18%	-35%	-52%

FRAGMENTATION EFFECTS BY STATION SIZE (Continued)

TABLE 1 (CONTINUED)

LOW RATED STATION

(all $ in millions)	Before:	- If Audience Fragmentation -		
		-5%	-10%	-15%
Station Rating	3.0	2.9	2.7	2.6
Power Ratio	0.95	0.95	0.95	0.95
Revenue Share	2.9%	2.7%	2.6%	2.4%
Station Revenue	$0.713	$0.677	$0.641	$0.606
Cost of Sales @ 30%	$0.214	$0.203	$0.192	$0.182
Fixed Expense	$0.427	$0.427	$0.427	$0.427
Cash Flow	$0.071	$0.046	$0.021	($0.004)
Margin	10%	7%	3%	-1%
% change of cash flow		-35%	-70%	-105%

1995 Kagan Media Appraisals, estimates.

FRAGMENTATION EFFECTS BY MARKET SIZE

FECTS ON STATION AUDIENCE SHARE

In order to determine the effects of increased competition on various market sizes, comparables (see example in Table 2 below) from various market segments were analyzed. During the 1980s, the FCC opened up the availability of radio spectrum to new FM channels, under FCC Docket 80-90. Known as "Drop Ins," the 80-90 Docket encouraged new applicants for radio channels, and literally hundreds of new stations were born via the process, all competing for listeners and advertisers. Satellite-delivered radio could pose a comparable situation to local radio.

In recent years, some markets have shown gains in average station revenues. However, our study focused on markets which experienced an increase in station population and the impact new entrants had on the average station's ability to generate advertising revenue, and, in turn, cash flow and profits. Thus, advertising revenue losses due to audience fragmentation is the most important criterion for selection of the sample markets in our study.

We compared 1985 and 1993 FM data because FM stations provide an excellent comparable to analyze audience fragmentation of local radio for the following reasons: (1) recently, FM radio stations have been the fastest growing radio segment and provide the most reliable comparable data for analysis on audience fragmentation; (2) reliable historical data prior to 1985 were not available; (3) many FM drop-ins were not operating or proving to be a market force prior to 1985; and (4) FCC-sanctioned spectrum allocations, in addition to FM drop-ins sanctioned in docket 80-90, increased in the late 1980s along with increased popularity of radio during this same period of time.

The average percentage of people using radio grew from 15.42% in 1980 to a high of 17.53% in 1989, according to James H. Duncan, Jr.'s American Radio, Spring 1993 National Rankings Supplement. By percentage, the measurement is based on average quarter hour listening, a key benchmark to measure radio audiences, and thus in turn, set advertising rates for prospective sponsors.

Markets were chosen from a cross-section of radio markets numbered 1-200 rather than randomly chosen. Each market studied showed 1-14 viable FM signals added between 1985 and 1993. By viable, we mean that the station's signal coverage characteristics are such that, under competent management, the station is thought to be a potential competitor capable of achieving audience ratings, or at least effectively capable of selling significant advertising time in its local service area. Even a station with minuscule ratings, given technical attributes and compelling programming, could become a market leader within time.

We focused on markets that saw a substantial increase in new signals. The number of viable FM signals in those markets, as detailed in BIA's Investing in Radio 1985, were divided into the FM share of listeners age twelve and over (12+ shares). This resulted in an average share per FM station. KMA estimates of radio market gross revenue in 1985 for each corresponding

FRAGMENTATION EFFECTS BY MARKET SIZE (Continued)

ket was indexed on 100 to yield each market's gross revenue per share. This value was multiplied by the average FM share to determine the gross revenues of the average FM station in each market. The table below depicts this analysis, using Austin, TX as a sample:

TABLE 2

Fragmentation Analysis Example: Austin, Texas
1985 vs. 1993

	1985	1993	Percent Change
Market Number	61	59	
Number FM Stations	8	14	75.0%
Market Gross Revenue ($mil.)	$27.2	$25.9	-4.8%
FM Total % of 12+ Share	65.1%	69.5%	6.8%
Average Share Per Station (FM total % of 12+ shares/number of FM shares)	8.1	5.0	-38.3%
Average Gross Rev./Share($mil.) (Market gross revenue/100)	$ 0.27	$ 0.26	-3.7%
Average FM Gross Revenue ($mil.) (Average share per station * average gross revenue per share)	$ 2.2	$ 1.3	-40.9%

c. 1995 Kagan Media Appraisals, estimates.

The same procedure was conducted on the most recent 1993 data for the rest of the selected markets using BIA's Investing in Radio 1993, 4th Edition. The values were then compared and changes in FM stations' average gross revenues from 1985-1993 noted. The results are outlined below:

FRAGMENTATION EFFECTS BY MARKET SIZE (Continued)

TABLE 3

Fragmentation Effects on Share and Net Revenues
1985 vs. 1993

Market Sizes	Average Share Per Station	Gross Rev. Per Share	Average Stn. Gross Rev.
Large (mkt. #1-44)	-31.3%	+29.2%	-11.6%
Medium (mkt. #45-136)	-37.0%	+33.3%	-16.7%
Small (mkt. #137-200)	-43.8%	+34.1%	-26.1%

c. 1995 Kagan Media Appraisals, estimates.

As the above table depicts, **the effect of fragmentation on industry participants has been negative even though market gross revenues have increased.** This is because the factor by which gross revenues are multiplied, the average share per station, has been reduced 31%-44% over the same period in the selected markets. Ratings and the resulting audience shares tend to drive revenues. The larger the audiences, in general, the more a station can charge advertisers and, in turn, the more revenues the station can generate.

Radio is a business of fixed "operating leverage." Once a station's fixed costs are met, every incremental dollar of revenue, net of variable selling costs, can flow to the "cash flow" line. Many stations never achieve positive cash flow because of high fixed operating costs in relation to their revenue base. Therefore, any loss in revenues from greater fragmentation invariably leads to substantial lowering of cash flows or the creation of increasingly negative cash flows.

FRAGMENTATION EFFECTS ON CASH FLOW

The loss (or gain) of average net revenues has a direct relationship to the loss of station cash flow. An operating leverage matrix establishes a direct relationship between a station's increases/decreases in net revenues and increases/decreases in broadcast cash flow (earnings plus interest, tax, depreciation and amortization). For the model, cost of sales is assumed to be 30%.

A key input is also the historical cash flow margin. What the numbers imply, given the earlier discussion on fragmentation, is that the negative impact on cash flow will be even more significant to the many stations which are not the top revenue generators in their markets. Using the earlier discussed results of lost revenues due to fragmentation and from historic cash flow margins, plus the NAB's 1986 Radio Financial Report and the operating leverage matrix, cash flow loss from audience fragmentation can be estimated:

FRAGMENTATION EFFECTS BY MARKET SIZE (Continued)

TABLE 4

Fragmentation's Effect on Average FM Station Broadcast Cash Flow

Market Segment	Average FM's Net Revenues	Historical CF Margin*	Implied Lost Cash Flow
Large (mkt. 1-44)	-11.6%	22%	- 51.7%
Medium (mkt. 45-136)	-16.7%	22%	- 52.1%
Small (mkt. 137-200)	-26.1%	15%	-121.8%

* cash flow margins on net revenues, assuming fixed costs remain unchanged, and a 30% cost of sales.

c. 1995 Kagan Media Appraisals, estimates.

For example, a station in a large market saw its net revenues decrease by 11.6%. Because the average station in those sized markets generates 22% of its net revenues into cash flow, this revenue decrease (11.6%) would reduce a station's cash flow by more than half.

As this table shows, in this scenario, audience fragmentation from new nationwide satellite-delivered radio channels could cause average stations in **large and medium markets (#1-#136) to lose half of their cash flow. Moreover, average stations in small markets (#137-#200) could lose all of their cash flow.**

LOSS OF NATIONAL ADVERTISING REVENUES

Primosphere, a proposed advertising-supported, satellite radio service, has argued before the FCC that it will take 10% of the national advertising revenues from local, terrestrial radio stations. Primosphere believes its service will attract a larger amount of national billings to radio and that these "extra" dollars, above the 10% of radio's national revenues, will be entirely Primosphere's.

For perspective, radio revenues from PKA for 1993 and estimates for 1994 are detailed below:

TABLE 5

RADIO REVENUES 1993 AND 1994
all dollars millions

	1993	1994
National	$1,566	$1,770
Network	423	444
Local	7,310	8,136
Total	$9,300	$10,350

c. 1995 Paul Kagan Associates, estimates.

For this study, Primosphere's scenario has been assumed, and analysis was conducted of a 10% decrease in local radio's national revenue base. We do not, however, believe that Primosphere's economics and revenue base will be based solely on attracting "extra" advertisers or ad dollars that are not already allocating their expenditures to existing local radio. **We believe, just the opposite -- namely that Primosphere's prime source of advertising revenue will come from fragmenting the existing national revenue base of the local radio industry.**

The loss of national advertising revenues will affect stations differently. Depending upon the size of the station, the loss of national advertising will decrease net revenues and resulting cash flows by varying amounts. Using the operating leverage matrix, Primosphere's estimated 10% share of national advertising revenues could cause the following impact on local radio stations:

LOSS OF NATIONAL ADVERTISING REVENUES (continued)

TABLE 6

Station Losses From Primosphere 10% Share National Ad Revenue*

	Nat'l Dollars % Total Time Sales	Nat'l Dollars Less 10% Revenue	Historic CF Margin	CF Loss From Nat'l Rev.
Large Stations ($8-10 mil NR)	23.4%	21.1%	34%	-4.8%
Medium Stations ($3-5 mil) NR)	19.7%	17.7%	25%	-5.5%
Small Market ($250-750K NR)	15.1%	13.6%	11%	-9.5%

* Revenues are net of 12% rep/agency fees.

c. 1995 Kagan Media Appraisals, estimates.

National billings comprise 23.4% of large stations' net billings (Net Revenues) 19.7% of medium stations', and 15.1% of small stations'. A loss of 10% in national advertising revenues would mean national revenue would fall to 21.1% of large station revenues, 17.7% of medium stations revenues and 13.6% of small stations revenues.

Ultimately, a 10% loss in national billings could mean large stations lose 4.8%, medium stations lose 5.5%, and small stations lose 9.5% of their cash flow.

CONCLUSION

The effects on local radio from audience fragmentation and from a 10% loss in national advertising -- all which would be due to the effects of satellite-delivered radio -- have been analyzed.

Audience fragmentation was studied in markets which had between one and 14 FM signals added between 1985 and 1993. As explained above, the experience of FM stations during this period of time provides an excellent comparable for analysis of the likely impact of satellite delivered services on local radio -- both FM and AM terrestrial radio outlets. It should be emphasized that of the 36 markets studied, the average market had only six stations added, yet these markets' radio stations displayed significant losses in average station net revenues. The satellite-delivered services expect to have a significant penetration within only a few years of introduction of possibly scores of satellite delivered signals. **Thus, the real impact of these satellite-delivered services would be even greater than we have depicted herein.**

Indeed, while the four satellite-delivered radio companies *each* propose, in effect, 21 to 31 new radio channels locally, the impact of only *one* new service could fragment radio audiences severely enough that traditional radio would no longer be profitable. This is apparent in light of the following fragmentation effects on average FM radio stations, 1985 vs. 1993:

TABLE 7

AUDIENCE FRAGMENTATION EFFECTS ON AVERAGE RADIO GROSS REVENUE AND CASH FLOW

1985 vs. 1993
effect of an average of six added signals

	Net Revenue	Cash Flow
Large Market Stations (mkt #1-44)	-11.6%	- 51.7%
Medium Market Stations (mkt #45-136)	-16.7%	- 52.1%
Small Market Stations (mkt #136-200)	-26.1%	-121.8%

c. 1995 Kagan Media Appraisals, estimates.

In our analysis of the FM experience under "Docket 80-90," an average of *six* new signals caused average large market stations to lose 12% of their gross revenue and over half of their cash flow. Average medium market stations lost 17% of their billings and 52% of their cash flow. The most severely hurt were average small market stations which lost over a quarter of their revenues and all of their cash flow.

CONCLUSION (continued)

The advertiser-supported service proposed by Primosphere would cause not only fragmentation losses but also bottom line losses from lost national billings. A 10% loss in national revenue would have the following effect on station net revenues and cash flow:

TABLE 8

Station Losses From Primosphere 10% Share National Ad Revenue

	Lost Net Revenues	Lost Cash Flow
Large Stations ($8-10 mil. NR)	-2.3%	-4.8%
Medium Stations ($3-5 mil. NR)	-2.0%	-5.5%
Small Stations ($250-750K NR)	-1.5%	-9.5%

c. 1995 Kagan Media Appraisals, estimates.

Vitally important is the fact that, at the most basic level, the audience fragmentation occurring from even six satellite-delivered radio channels could take half the cash flow from average large and medium market stations and all of average small market stations' cash flow.

As shown in the beginning of this report, in the summary table of proposed satellite delivered radio services, proponents are promising 21 - 32 channels each. **While the impact of such a proliferation of programming sources might be shouldered by the largest market stations with the strongest financial resources, the onslaught of new services would likely be devastating to smaller market local radio operations.**

STATEMENT OF LIMITING CONDITIONS

The opinions, conclusions, projections and estimates presented in this report are based on our 25 years of experience in the communications and entertainment industries and the technical competence and the experienced judgement of the staff of Kagan Media Appraisals, Inc. This report, or any parts thereof, is not intended for use as a business plan. It is offered solely as an independent study of the broadcast marketplace in general and the potential impact of satellite radio services on the local broadcast industry.

Unless previous written arrangements have been made, neither Kagan Media Appraisals, Inc., nor any officer of Kagan Media Appraisals, Inc., is required to give testimony or attendance in court, pretrial proceedings or arbitration by reason of having made, or participated in, this report.

The reader is advised that this Statement of Limiting Conditions and the accompanying introductory pages are an integral part of the final report, which contains the details of our analyses and all necessary documentation to support conclusions.

Signed: _____

Kagan Media Appraisals, Inc./Bruce Bishop Cheen